

## ABSTRACT OF THE DISCLOSURE

In embedding a dot pattern in an image, use of a dot pattern component that mainly aims at suppressing any degradation in image quality sacrifices accurate information detection. Conversely, use of a component that aims at improving the detection accuracy largely degrades the image quality. Error diffusion is executed for an image, a component of a dot pattern to be embedded is determined on the basis of the image that has undergone error diffusion, and the dot pattern is embedded in the image that has undergone error diffusion using the determined component.